DOCUMENT RESUME

ED 446 966 SE 064 210

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TITLE My Patch of Earth: Using the Schoolground as a Teaching and Learning Referent for an Environmental Ethic.

SPONS AGENCY Curtin Univ. of Technology, Perth (Australia).; Organisation for Economic Cooperation and Development, Paris (France).; Learning through Landscapes Trust, Winchester (England).

PUB DATE 1997-09-00

NOTE 12p.; Paper presented at the Learning through Landscapes: Grounds for Celebration Conference sponsored by the Organisation for Economic Cooperation and Development and the Department for Education and Employment (Winchester, United Kingdom, September 21-24, 1997).

PUB TYPE Reports - Descriptive (141) -- Speeches/Meeting Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS Elementary Secondary Education; Environmental Influences; Ethics; Gardens; *Hands on Science; *Outdoor Education; Teaching Methods

IDENTIFIERS *Outdoor Recreation

ABSTRACT

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My Patch of Earth:
Using the Schoolground as a
Teaching and Learning Referent for an Environmental Ethic

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Winchester, United Kingdom

21-24 September 1997

Abstract

The schoolground is a small and vital piece of earth - a microcosm of a diverse and sustaining world. Promoting an environmental ethic in this location is a challenging opportunity for educators. This paper shows that natural places in schoolgrounds can provide the venue for exciting and ongoing teaching and learning opportunities in this outdoor classroom.

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Introduction

Conservative pedagogy is based indoors on abstractions where knowledge is compartmentalised into daily timetables. It does not encourage teachers or learners to

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make links between ideas in different subject areas and to the earth. Orr (1994:22) is concerned that 'the dangers of formal schooling will result in students graduating 'without knowing how to think in whole systems, how to find connections, how to ask big questions and how to separate the trivial from the important'.

Educational strategies which fosters a sense of the relationships between people and ecological communities will help to support meaningful learning within the context of the surrounding environment. This paper first presents how stories and a spiritual connection to the land can be empowering teaching perspectives. This is followed by an assessment of Ecoliteracy and the US-based Earth Education program which explore concepts of ecology to support learning. The Australian Timelines project and the International Globe Program are introduced as initiatives that can promote the regular observation and monitoring of natural events in schoolgrounds.

The paper then introduces the story *My Patch* (Smit 1997) as a referent for teaching and learning in the schoolgrounds. This paper suggests that time in, and experiences with, the surrounding natural environment, provides a better understanding of ecosystems and promotes continuity between people and the land. Developed by the author, with a class of 6 year old children, the story provides an integrated learning focus characteristic of a holistic view of education. The final section of the paper discusses the relevance of *My Patch* in an educational context to show ways in which the story assists in developing an environmental ethic. In a practical way it shows how children experience first hand the changes in a square metre patch of earth in the schoolground they develop a sense of wonder and a strong sense of identity and connection with their natural surroundings.

Stories and the Land - Developing an Environmental Ethic

A story is a powerful strategy for teaching and learning. Stories can help develop our understanding of the places where we live. They can also help us create our own narratives supporting the development of shared stories - our cultural myths and legends. Stories are made, told and retold. Myths, legends and folktales have been the cornerstones of teaching in every culture (Cajete, 1994:116). Stories are an important means to understand ourselves and interpret experiences in the context of the habitat.

The stories of indigenous cultures are closely related to the land. According to Bowers (1993:7), 'traditional cultures that have evolved in more ecologically sustainable ways have also developed music, art, dance and storytelling as a way of expressing a sense of spirituality that integrates the self with other life forms that share a common habitat'. There is a strong sense of social cohesion in the tribe, which helps the community develop their understandings of place, in contrast to the focus on the individual typical of Western culture.

In Australia, Aboriginal stories are the bond between Earth Mother, the sea and the sky (Oodgeroo, 1990:9). Passed down through thousands of years, Aboriginal stories, called Dreaming stories, have been told, sung and danced. They have continued to inform Aboriginals about the history of the land and have been 'powerful ways to educate young children' (South Australia: 1988:21). The natural world is seen as the link between the people and the Dreaming, especially in relation to the land to which a person belongs. There is a close relationship with nature rather than a control over it.To develop an ethic for the environment, educators need to look to the stories of indigenous cultures. The domination of the land is not supported, rather consideration and respect for all creatures, living with the land in a harmonious relationship and developing what Wilson (1984) calls 'biophilia' - the affinity for the living world.

In Western culture Leopold (1966) stressed the importance of a spiritual connection with the land and articulated the term environmental ethic. According to Leopold (1966: 239) ethics are 'possibly a kind of community instinct in the making: the land ethic simply enlarges the boundaries of the community to include soils, waters, plants and animals, or collectively: the land'. An ethical relation to the land cannot exist without love, respect and admiration for the land and a high regard for its value (Leopold, 1966:251). This concept of an environmental ethic has ongoing support by environmental education theorists.

Orr (1994:32) supports Leopold when he suggests that the ecological emergency will only be resolved if we expand on what it means to be a citizen. The word patriotism must come to include the concept of sustainable use of land, plants, air, water and wildlife. Perhaps the most serious obstacle impeding the evolution of a land ethic is the fact that our education and economic system is headed away from, rather than toward an intense consciousness of the land (Leopold, 1996:261). Although ecological realities pattern and govern everything we do, most of us are totally ignorant of them (Clark, 1997:68). Urban societies are increasingly disconnected with the land and do not need to understand the land for their direct survival as indigenous cultures did.

Orr (1994:23) is concerned 'that education with excess abstractions, divorced from lived experience' ... 'by too much television and too many computers, by too much indoor learning' will reduce the sense of wonder. He declares that 'as our sense of wonder in nature diminishes so too does our sense of the sacred, our pleasure in the created world, and the impulse behind a great deal of our best thinking' (Orr, 1994:24). This 'best thinking' as described by Orr, is not about the conventional notion of the complicated nature of accumulated knowledge, linked to the metaphor of the mind as a computer and the idea of technical intelligence. Rather, best thinking is about the cleverness that comes from seeing the big picture associated with our 'acting and existing in a logically and phenomenologically constructed world' (Davis and Samara, 1997:109). Good learning exists in a complex but related web of events where students make connections, ask big questions and look for patterns whilst celebrating earth's wonders.

Education which focuses on the earth promotes learners to make connections through interactive and questioning conversations (Orr, 1992). Education is seen as a dialogue with place and with the characteristics of good evolving conversation rather than a monologue of human interest focused on a specialist discipline without reference to people's dependence on nature.

Supporting this are the ideas of earth-centred education called 'ecoliteracy' developed by Capra, Clark and Cooper (1993). To be 'ecoliterate' is to think holistically in terms of interconnections modelled on observations from nature. It shuns the specialised and narrow boundaries of conventional knowledge and excessive abstraction. Without ecoliteracy, Berry suggests, education will produce 'itinerant professional vandals', people devoid of any sense of place, stewardship or inkling of why these are important (Orr, 1992:90). An ecological perspective is seen as essential, to be woven throughout the entire curriculum of a clever society.

According to Clark (1995:14) ecoliteracy models based on our understanding of living systems provide powerful prototypes for designing participative learning communities which will motivate students, stimulate reflective, creative and critical thinking and encourage active student and community involvement. All members of a community, embedded in ecological systems learn to change, grow and adapt to curriculum challenges.

An American environmental education program, Earth Education supports the ecoliteracy emphasis on exploring concepts of ecology as a foundation for learning. Earth Education, which has been extensively adopted in Australia, the United Kingdom and the United States, is an instructional program which is 'a carefully crafted series of focused, cumulative learning experiences designed with specific outcomes in mind' (Van Matre, 1988). These experiences integrate a 'feeling component' as part of developing understanding through the building of key ecological concepts intended 'to familiarise, sensitise, naturalise and harmonise' (Van Matre, 1972:18). The programs are step by step units specifically aimed at developing a set of specific ecological concepts. Like the theorists of ecoliteracy, Earth Educators are critical of 'typical' environmental education programs which, they suggest, are a collection of randomly strung together, unrelated activities.

Earth Education makes no reference to the context of place or to the learner's conceptual understanding. The Institute of Earth Education stipulates that the activities must be developed as a complete package. Earth Education focuses on the concepts and the outcomes and not on the learner in the context of the local environment or the community of learners. There is no time for the incidental or to adapt the program, for specific students and teachers with different needs and interests, or to particular environments. Questions, issues and problems facing students in their own habitats,

and as part of the community are not developed. The focus is on individuals gaining knowledge. The Earth Education program assumes that the source of knowledge is found outside the individual and the local reference of nature.

The holistic theory of ecoliteracy, has been criticised by Wilbur (1997) as being an objective way of understanding through the many layers of systems, as a process without passion. Wilbur recognises the importance of the spirit as part of cultural hermeneutics or the idea of culturally constructed meaning. This stresses mutual understanding, an appreciation of aesthetics and empathy as vital qualities for understanding. According to Wilbur, the 'web of life' strands of systems theory discussed by ecoliteracy theorists such as Capra (1993) and Clark (1995), are all described in 'it' language. The 'I' and 'we' language which is promoted by the theory of cultural hermeneutics, in contrast, acknowledges the shared passion of experiences.

The Australian Timelines project also supports the development of an environmental ethic (Reid, 1995). This initiative is about making connections with the local environment. It promotes the idea of inhabitants observing, monitoring and recording the yearly patterns of natural events around them. Timelines has been inspired by Australian Aborigines whose survival depended upon a knowledge of the sequence of significant natural events. Since the European invasion of Australia, a simplistic objectified European model of the four seasons, has been adopted without question. This cultural myth has been supported by English children's stories and songs which suggest that in autumn all the trees lose their leaves and that it is always rainy and cold in winter. Every early childhood class in Tasmania interprets the coming of spring to include drawing and singing about introduced flowers such as tulips and daffodils. It is commonly accepted in southern Australia that spring begins on the first of September. Disconnected from the natural world, there is no reference to the equinox or the natural changes in the local environment. Timelines encourages the community to record patterns and make connections to support cultural understandings based on direct observations of local environmental events. The sharing of observations of patterns, change and relationships develops a sense of community of 'we' language as people link and bond with their environment.

The Globe Program is an international environmental education project focussed on monitoring. As part of this program one hundred and fifty school groups in Australia, monitor environmental phenomena in their local environment. Registered schools link with scientists to test water, air and soil quality in their schoolgrounds (Pyke, 1996). This is a world wide network of teachers, students and scientists collecting data. One of the mottos of the Globe Program is, 'good education = good data = good science' (Pyke, 1996: 1/20). The Globe Program is an international initiative to collect information, in 'it' language. The sense of a bonding with the environment is not part of the motto.Science in the form of data collection and analysis is the motivation for the program. The development of an affinity with the land may or may not occur.

The importance of the natural environment as a resource to help us to interpret the world is recognised in a range of strategies including scientific, systems and spiritual approaches. Involving young children directly in interpreting their habitat and telling their own stories as part of their first and ongoing learning experiences provides an important context for these ways of teaching and learning.

My Patch - A Referent for Teaching and Learning

Stories are made from experiences which are significant and powerful for the individual. The story of *My Patch* is about a close relationship with the land. It describes how a child adopted a piece of the earth in the schoolground through the year and celebrated its wonders and changes. *My Patch* was written in conjunction with a year long teaching and learning experience with a class of 6 year old children, excited about their discoveries in the schoolground. Children chose and adopted their own square metre patches of ground. This selected area became their special place. Written from the point of view of the child, the book uses children's illustrations to recognise and celebrate their creativity. A child's perspective was chosen to provide an accessible model for young learners to develop their own narratives of place.

Egan (1986:9) recognises the importance of an accessible focus for learning when he states that in educating young children we should start from what they know best and expand outward from that. *My Patch* reveals my commitment to a local focus in the context of the environment. The story provides a meaningful opportunity for young children to begin to know their home. It is a powerful strategy to help young children get excited about biodiversity, to understand change and to value their place. The myths which come from story telling for young children can shape the development of ideals and values which can eventually be examined and understood in the context of different world views (Egan, 1986).

Indigenous stories developed from a bond with the land. *My Patch* similarly uses the land as the source for making and retelling stories. The publication is being used by indigenous educators in Tasmania to reinforce children's affinities with the earth. It provides a resource for teachers in Tasmania to initiate environmental education projects.

Many teachers want to know where to start. *My Patch* provides a purposeful initial strategy in any schoolground, for teaching and learning. Learners are encouraged to develop a sense of their biosphere by directly observing changes over the year, where the focus will change from the microscopic to the global, from natural to social systems. In their 'patch', time for solitary experiences encourages children to sit and absorb their surroundings using all their senses. Opportunities for sharing and comparing patches - inviting friends to talk and tell stories, and at times to draw, to read and to write within their squares - helps to create a strong link between the learners and their local habitat.

This encourages learners to make connections through interactive and questioning conversations, as discussed by Orr (1992).

Developing deep connections, raising questions coming from direct observation and exploration can lead to ideas of speculative causation and profound understandings of change and interrelationships in a meaningful cross currricula context. The *My Patch* story, for example, raises questions such as 'I would like to know what that patch of earth on the other side of the world looks like?' It speculates on the arsonist and makes connections, such as 'When the rain came, a toadstool broke through the soil' (Smit, 1997). The changes of the seasons are connected with observations, such as the sundews in spring and the diamonds of ice in winter.

My Patch provides an integrated learning focus characteristic of a holistic view of education and is connected to the ideas of ecoliteracy developed by Capra, Clark and Cooper (1993). *My Patch* can inspire the development of locally constructed school based curricula where understanding of ecosystems can be a context for curriculum design. Accordingly, connecting with 'a patch' of the schoolground may help children to be aware of the social and natural interconnectedness of issues in schoolground management and planning. The complex dynamics of planning for a variety of users in a schoolground may be better understood when children have experienced the changes in 'their patch' and the biodiversity of life forms within it.

Children get to know their special places. Adopting 'a patch' encourages an on-going commitment to, and passion for, a local space where the learner will 'know more about [their] patch than anyone in the world' (Smit, 1997). This dispels the idea that knowledge of 'their patch' can only be understood by experts. By choosing, and developing an affinity for their special place children will be keen to observe and investigate over time. Through research of their square metre patch of earth over time, students will develop an understanding of the concept of the quadrat as a tool for scientific inquiry. They can record data about their findings in a methodical way, to link with international collation and research for the International Globe Program. Good bonding with the local biosphere would provide an important element to support the development of an environmental ethic, before data are collected. Good data and good science are more likely to happen when a sense of caring for the place being measured has first been established.

Children come to love and care about their 'patch'. 'Science without passion and love can give us no good reason to appreciate the sunset, nor can it give us any purely objective reason to value life' (Orr, 1994:33). *My Patch* is a story of love and promotes a love of story. The story deals with the love for the land - developing a relationship with the land and coming to value it with passion and commitment.

The effectiveness of *My Patch* as an educational strategy comes from the sense of

identity children develop in adopting, and making a spiritual connection with their special place. The title, *My Patch*, acknowledges the personal nature of the experiences in adopting a piece of ground, which Wilbur (1997) identified as relating to the subjective sense of consciousness. Students come to feel very strongly about their place. Without this spiritual connection, the link with an understanding of ecosystems will be purely academic.

Ecoliteracy theorists are less concerned with the sense of affinity that *My Patch* promotes. The focus on systems, Wilbur (1997:21) asserts 'can be thoroughly accounted for as holistic systems of dynamically interwoven its'. Clark(1995) suggests that ecoliteracy will motivate the students and encourage active student participation by designing models for learning based on ecosystems. This will provide a perspective into complexity and help to focus on issues relating to the big picture in an objective way. This ecosystems modelling does not consider subjective values of empathy, art and aesthetics or morals and ethics. Rather than identify with 'my patch' it looks at 'the patch' as a means to model learning.

Without the development of an affinity to the land, programs may become meaningless to the learner. The Earth Education Program (Van Matre, 1988) is a case in point. The activities do not encourage students re-evaluate of their own ecological concepts in the context of the environment where the programs are held. The place where the programs take place are incidental to the big picture focus on concepts. Without reference to people or place, however concepts will lose their relevance and meaning.

The Timelines project encourages people to develop their own narratives of their habitat. Concepts of their place will develop through monitoring the yearly patterns of interrelationships in nature. Like indigenous cultures, participants come to understand ecological concepts as a result of vigilance in the nature of their place. The idea of Timelines helps to dispel the cultural myths about seasonal change borrowed from European culture, by celebrating and supporting learning from direct observations in the local environment. Establishing Timelines, like the Globe Program, in monitoring local sites, will be supported when children develop a spiritual connection with the land by 'adopting a 'patch'. Once 'a patch' had been identified it would be a logical development to observe and monitor the yearly patterns of natural events.

Time in, and experiences with, the surrounding natural environment will help children to make connections and later draw on this memory to recognise the continuity between them and the land with its complex ecosystems. The impact of this experience was highlighted to me recently when the mother of a boy I taught four years ago said she and her son had just been to visit his patch he had adopted nearby to the school. Now in secondary school, he still has a strong affinity with his square metre of earth and with his broader local environment. *My Patch* can stimulate significant experiences for children which they can hold, connect with and refer back to. It can become part of their

ecological autobiography (Wilson, 1995), which can help children to understand the development of their conceptual understandings and values.

My Patch can initiate the celebration of what is special in the schoolgrounds. It reinforces the idea that sources of wonder and curiosity can be found close by, with a hand lens on a rock, or the patterns of a spider's web on a wall. For many children adopting a square metre patch in the schoolground will be their first powerful and authentic experience with the earth.

Conclusion

The first way of thinking and knowing has to do with one's physical place. Learning will occur in the spatial context of lived experience. The natural locations of the home, the local environment, the schoolground and the backyard will help to shape children's understanding of the earth upon which they live, encouraging the development of a sense of community responsibility known as the environmental ethic.

Natural areas in schoolgrounds are a precious resource which can provide significant teaching and learning opportunities, across the curriculum. The story of *My Patch* comes from my concern for young learners to have significant experiences with their schoolgrounds, to give them a sense of connection and celebration of the earth and to create their own narratives. It is hoped that this will encourage them to take responsibility for the management of the land and ultimately to live well in their place.

My Patch supports the development of a personal attitude to the land. It provides an opportunity to read the land, toward ecoliteracy, in making connections with ecosystems that will have social relevance and application. Primarily it will help to motivate and enthuse children in the development of a spiritual connection. It will stimulate their imagination and their creativity. The focus on 'a patch' of earth will help children to understand who they are, where they have come from and what is important to them in thinking towards the future.

Acknowledgements

The author acknowledges the financial support of the Organisation of Economic Cooperation and Development and Curtin University, Perth, Western Australia and the support of Learning Through Landscapes, UK.

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